CLAIMS:

1.   Interference canceller comprising an adaptive filter for modeling an
interference, and a spectral processor for processing the modeled interference together with
near end speech and the actual interference, characterized in that the interference canceller
further comprises an interference model mismatch compensator coupled to the adaptive filter
5   for providing a mismatch signal for the spectral processor, said mismatch signal showing a
speech independent decay.

2.   Interference canceller according to claim 2, characterized in that the
interference canceller comprises a step size estimator coupled to the interference model
10   mismatch compensator.

3.   Interference canceller according to claim 1 or 2, characterized in that the
interference model mismatch compensator is arranged for calculating an interference model
mismatch estimate based on a minimum of the ratio of a spectral measure of the near end
15   speech and actual interference, and the modeled interference of the adaptive filter.

4.   Interference canceller according to claim 3, characterized in that the minimum
of said ratio is determined over a time span.

20   5.   Interference canceller according to claim 4, characterized in that the time span
contains at least one pause in the speech.

6.   Interference canceller according to claim 4 or 5, characterized in that the time
span lasts at least 4 to 5 seconds.
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7.   Interference canceller according to one of the claims 3-6, characterized in that
the spectral measure is defined by some positive function of the spectral power concerned,
such as the spectral magnitude, the squared spectral magnitude, the power spectral density or
the Mel-scale spectral density.

8.   Interference canceller according to one of the claims 1-7, characterized in that
the interference canceller is embodied as an echo canceller and/or a noise canceller.

5   9.   System, in particular a communication system, for example a hands-free
communication device, such as a mobile telephone, a speech recognition system or a voice
controlled system, which system is provided with an interference canceller according to one
of the claims 1-8, the interference canceller comprising an adaptive filter for modeling an
actual interference, and a spectral processor for processing the modeled interference together
10   with near end speech and the actual interference, characterized in that the interference
canceller further comprises an interference model mismatch compensator coupled to the
adaptive filter for providing a mismatch signal for the spectral processor, said mismatch
signal showing a speech independent decay.

15   10.   Method for cancelling an interference, whereby an actual interference is
modeled and the modeled interference, together with near end speech and the actual
interference are processed, characterized in that an interference model mismatch signal is
used for modeling the actual interference, which mismatch signal shows a speech
independent decay.

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11.   Signals suited for use in the interference canceller according to one of the
claims 1-8, the interference canceller comprising an adaptive filter for modeling an actual
interference, and a spectral processor for processing the modeled interference together with
near end speech and the actual interference, characterized in that the interference canceller
25   further comprises an interference model mismatch compensator coupled to the adaptive filter
for providing a mismatch signal to the spectral processor, said mismatch signal showing a
speech independent decay.